

REMARKS

Claims

Claims 1, 12, 14-20 and 73-85 are pending. Claims 2-11, 21 and 23-72 have been withdrawn from consideration in view of a prior restriction and election requirement. Claims 13 and 22 were previously cancelled. Claims 77-84 have been allowed and claims 14 and 73-76 have been objected to, but would be allowable if rewritten in independent form. Claims 1, 12, 15-20 and 85 stand rejected.

Claim 14 is amended in this response to place it in independent form. Applicants acknowledge with appreciation the Examiner's indication of allowance of claims 77-84 and the allowability of claims 14 and 73-76. In view of the amendment to claim 14, claims 14 and 73-84 should now be allowed.

Applicants, however, respectfully traverse the rejection of claims 1, 12, 15-20 and 85 and offer the following comments.

35 U.S.C. §103(a)

In the Office Action, claims 1, 12, 15-20 and 85 were rejected under 35 U.S.C. §103(a) as being unpatentable, over the teachings of U.S. Patent No. 5,878,783 to Smart in view of U.S. Patent No. 5,899,795 to Penza and U.S. Patent No. 5,363,935 to Schempf et al.

The Examiner stated that Smart includes some suggestion that the modules can be taken apart even though such is not specifically disclosed. The Examiner posits that the "suggestion" is found in the Smart patent by piecing together two statements. At col. 1, lines 52-64 the Smart patent states that "[t]he in-pipe vehicle 10 of Fig. 2 includes a plurality of dissimilar individual modules 11-16 linked via similar linkage and suspension modules 17. The train of modular elements allows flexibility of operation in that each module provides a specific function which in this embodiment work together Other modular configurations would allow further tasks to be effected. The modular arrangement together with the suspension modules allows the degree of serpentine operation needed to negotiate bends in the pipe and to cope with the small diameter of the pipe which can be less than 150 mm." The second piece is believed to be provided at col. 2, lines 14-29 wherein the Smart patent states that "[e]lectrical connection to the modules is provided via the suspension unit 17 connectors. The suspension units 17 are provided of

common construction and placed between each functional module to give the train flexibility required for small pipes. ... A central shaft 33 through each suspension unit is free to rotate relative to the body. Connectors at each end allow electrical connection between all modules to be effected for power and intercommunication requirements.” The Examiner stated further that the patent to Smart discloses all recited structure with the exception of providing a brush and a camera and “forming the connections to allow detaching modules and thereby making them interchangeable.” The patent to Penza is cited as disclosing a brush and camera attachment and the patent to Schempf et al is cited as disclosing interchangeable modules.

MPEP § 706.02(j) provides that “there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or to combine reference teachings. ... The teaching or suggestion to make the claimed combination must be found in the prior art and *not based on applicant's disclosure*. (emphasis added) *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).” MPEP §2143.03 requires that in order to establish a prima facie case of obviousness, “all the claim limitations must be taught or suggested by the prior art.”

The Court of Appeals for the Federal Circuit has determined that whether or not disclosures in two or more prior art references are properly combinable depends, generally, on whether there is some teaching or suggestion in those references or elsewhere in the prior art to suggest the desirability of making the combination. The mere fact that it is possible to find two isolated disclosures having some individual features that might be combined in a manner that would result in the claimed invention is not enough. There must be something in the prior art itself that suggests the desirability of that claimed combination. It is improper to pick and choose among the individual parts of various prior art references as a mosaic to recreate a facsimile of the claimed invention using the inventor's disclosure as an instruction book on how to reconstruct the prior art. To do so is impermissible hindsight reasoning. Additionally, the problem confronted by the inventor must be considered in determining whether it would have been obvious to combine the references in that manner to solve a particular problem. *See In re Fine*, 5 USPQ2d 1596,1599 (Fed. Cir. 1998).

Applicants respectfully disagree with the Examiner's interpretation of the cited passages in the Smart patent and believe that the Examiner is using impermissible hindsight to reach such a construction. As the Examiner admitted, the Smart patent does not disclose "forming the connections to allow detaching modules and thereby making them interchangeable." A fair reading of both of the cited passages shows that Smart was concerned with the flexibility of the vehicle through small pipe. In the passage at col. 1, Smart provides that the "modular arrangement together with the suspension modules allows the degree of serpentine operation needed to negotiate bends in the pipe and to cope with the small diameter of the pipe which can be less than 150 mm." In the passage at col. 2, Smart provides that the "suspension units 17 are ... placed between each functional module to give the train flexibility required for small pipes." Connectors are mentioned in the second passage only in reference to electrical connections as a means for providing power and intercommunication between modules. Nothing more specific is stated about the connectors. There is no teaching of any kind of a releasable connection between the modules and the units 17. There is no teaching or suggestion of the way in which the "connectors" connect or if, where or how the connectors themselves might be connected to either the suspension units or the modules. Further, there is nothing shown in the drawings to show what Smart had in mind concerning a connector. Applicants submit that the Examiner is speculating as to what Smart's "connectors" could be and what other purpose besides electrical connection they might serve. It is more likely that the connectors are for ease of assembly, with no intent to disassemble the electrical connections or the modules afterwards. The leap from electrical connection between modules for communication purposes to interchangeability of modules is not supported by the Smart patent or by the other cited prior art references.

Further, Smart does not indicate that any of the modules should be or can be removed or interchanged with other modules. Smart provides in the first cited passage that the vehicle has "a plurality of dissimilar individual modules 11-16 linked via similar linkage and suspension modules 17." If Smart intended to suggest that the modules could be interchangeable, he could have said the six modules were *releasably* linked, or that *one or more* of the six dissimilar modules could be linked to the units 17. What Smart said, however, is that his vehicle includes six individual dissimilar modules 11-16 and that the six individual modules 11-16 *are linked* via

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linkage and suspension modules, or units 17. Notwithstanding the fact that Smart was concerned about negotiating the in-pipe vehicle through small pipes, there is simply no evidence that it ever occurred to Smart that maneuvering his vehicle through small pipes could be easier with a smaller train and fewer modules, or that by having interchangeable modules, he could get the benefit of the breadth of function provided by six individual dissimilar modules without the associated maneuvering difficulties. The only way one can read Smart and find a suggestion for interchangeability of modules is to read it in light of the disclosure of the present application wherein the interchangeability of modules that perform dissimilar functions in a pipe line is clearly intended and described.

As stated above, the Court of Appeals for the Federal Circuit has stated that the mere fact that it is possible to find two isolated disclosures having some individual features that might be combined in a manner that would result in the claimed invention is not enough. There must be something in the prior art itself that suggests the desirability of that claimed combination. There is nothing in either the Smart or the Schempf patents to suggest the desirability of the combination proposed by the Examiner. The Federal Circuit has also stated that it is improper to pick and choose among the individual parts of various prior art references as a mosaic to recreate a facsimile of the claimed invention, especially as in the instant case, where it appears that the disclosure of the present application has been used as an instruction book on how to reconstruct randomly selected pieces of the prior art.

As stated previously, the modules (11-16) are not disclosed as being interchangeable. There is no teaching or suggestion in the Smart patent that the modules (11-16) are interchangeable or otherwise have joints that releasably connect the modules to one another, and there is no motivation to make them so. Further, there is no disclosure of having two flexible joints that releasably connect the modules as claimed in claim 1. Finally, there is no suggestion as to which elements from the Smart and Schempf patents one skilled in the art would pick and choose to reconstruct Smart's device to achieve applicants' claimed multi-module device.

Based on the foregoing, applicants submit that the device recited in claim 1 is not obvious in view of the combination of the cited references. Because claims 12, 15-20 and 85 include all

would mention other configurations of modules if they were interchangeable

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of the elements of claim 1, they too are not obvious in view of the cited references. Withdrawal of the rejections of claims 1, 12, 15-20 and 85 under 35 U.S.C. §103 is respectfully requested.

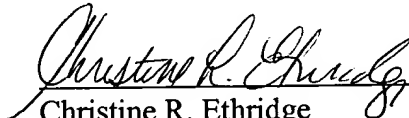
CONCLUSION

Applicants have made every effort to be fully responsive to the Office Action. Claim 14 has been amended to place that claim in independent form. Claims 14 and 73-84 are therefore in condition for allowance. Claims 1, 12, 15-20 and 85, as demonstrated by the remarks expressed above, also recite a novel and nonobvious device. Reconsideration and allowance of claims 1, 12, 15-20 and 85 are requested. If the Examiner finds claim 1 to be allowable, applicants request consideration of the claims previously withdrawn from consideration.

Applicants hereby petition for a two-month extension of time. If additional time is required, please consider this a petition therefore. The PTO is authorized to charge Deposit Account No. 11-1110 for the fees associated with this petition and any other fees associated with this Amendment.

If the undersigned can be of assistance to the Examiner in advancing the application to allowance, the Examiner is encouraged to contact the undersigned at the number set forth below.

Respectfully submitted,


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